

Homemade Solar Systems

Like other Americans, Peter Kask is concerned about the cost and possible shortage of energy—and he is doing something about it with the help of NASA technical information. A civil engineer who lives in Huntington, New York, Kask plans eventual independence of fossil fuel energy by substituting solar energy systems for all home needs. As a first step, he has “solarized” his home’s domestic hot water supply and his heated swimming pool (right).

In NASA’s *Tech Briefs*, a quarterly technical information journal, Kask read of a design for a low-cost solar collector system. Applying the design information, he was able to build the swimming pool heating system with minimal outlay for materials. Shown below left, the system consists of two long collectors utilizing inexpensive aluminum plates to absorb the sun’s heat. Mounted on the pool’s roof, the collectors are built into water troughs constructed of plywood, insulated with styrofoam and made leakproof by a layer of polyethylene film. Heat absorbed by the collectors is transferred directly to the water, which is ducted into the pool. Another *Tech Briefs* report supplied information which helped Kask build the domestic hot water system pictured below right. The two solar panels, bought commercially, are mounted on a structure which can be moved in two axes to track the sun as it changes position, thus increasing the efficiency of the collectors.

